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How to Capture What Farmers Think



Abstract

How to Capture What Farmers Think

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This report is designed to be a guide for cooperative leaders seeking to determine the needs of members and nonmembers alike. Questionnaire construction is discussed along with confidentiality, nonresponse, missing data, and other factors that play a role in the collection of data. Coding the information for computer input along with the analysis of the data is covered. An example questionnaire is provided.

Keywords: cooperatives, farmers, questionnaire, coding, confidentiality, mailing procedures, survey

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Preface

This report describes a set of procedures for collecting and analyzing data through the use of mail surveys and for assessing programmatic changes and product lines of agricultural cooperatives. However, the techniques described here, while applied to agricultural cooperatives, can be used for any data collection needs.

Methods described in this report focus on how to get the highest possible response rate, and how to design a questionnaire in such a manner that the data obtained are valid and reliable. After these areas have been addressed, data analysis components of survey research are covered.

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HOW TO CAPTURE WHAT FARMERS THINK

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DOING SURVEY RESEARCH

Well-done survey research depends on two things: getting a sample that can be comfortably generalized to the population of interest, and designing a survey instrument that will encourage people to respond with good information.

Sample Ability to Generalize

If, for example, surveys sent to a random sample of 1,000 persons result in only 100 (10 percent) responses, not much confidence can be placed in the collected data. If the response rate is only 10 percent, this means *you don't know what the other 90 percent think*. In all survey research, aim for the highest possible response rate.

In practice, with farm-related surveys, a 50-percent response rate is a worthy target. This doesn't suggest stopping at 50 percent. The higher the response rate, the better.

Designing a Good Survey Instrument

It is not easy to write survey questions that are easy for people to answer, particularly with answers that reflect how the researcher *meant* people to respond.

Methods described in this manual focus directly or indirectly on two issues: how to get the highest possible response rate, and how to design a survey to obtain good data.

SAMPLING

Just about anyone who collects data does so on a *sample* of some population. The population of interest is ordinarily so large that complete enumeration is both extremely costly and time consuming. Thus, a sample is chosen that will hopefully reflect the whole population.

Size of Sample

It is well known that the Gallup organization usually bases its descriptions of public opinion on a sample of about 1,600 people. The sample is used to generalize to the entire U.S. population.

While statistical formulas can help determine an appropriate sample size, the formulas require the researcher to know (or be able to estimate) the standard deviations of certain variables in the population. The researcher also has to specify the degree of error he or she is willing to accept in the estimates produced by the data.

Without dwelling on all the issues related to sample size, the researcher should aim for an *obtained* sample size of between 200 and 500 persons for each region surveyed. Fewer than 200 cases make it likely that some relationships between variables will not emerge from the data. More than 500 cases begins to diminish the returns for the money spent. Assuming a response rate of 50 percent, this means mailing out surveys to between 400 and 1,000 persons.

Quality of Sample

The number of respondents in the final sample, however, is not as crucial as the sample's effectiveness in generalizing to the population. Most studies send out surveys to a random sample of some population. Drawing a random sample is easy; defining the population from which to draw a sample is not. Great effort must be made to ensure that the sample is as representative as possible of the population. Sometimes lists of farmers—co-op members, for example—are easily obtained; sometimes they are not, such as lists of all farmers in a State.

A small, representative sample is better than a large, nonrepresentative sample; the quality of the sample obtained will never be better than the list it is drawn from.

QUESTIONNAIRE DESIGN

The enclosed questionnaire (see appendix A) is a duplicate of one pretested as part of a survey of cooperative members in the Eastern United States. Several features of its construction either contribute to high response rates or increase the quality of the data collected.

Improving Response Rates

Notice the appealing nature of the questionnaire. A graphic on the front with two phrases indicates what the survey is about. At the bottom of the cover is a blank space for an emblem or phrase denoting the sponsor of the survey. No questions *at all* appear on the cover.

Examine the back cover. No specific questions appear here either. Only an appeal to the respondent to help further clarify his or her responses, and a “carrot;” that is, a promise of something (a summary of results) in return for filling out the form.

By attractively packaging the survey, the researcher shows the respondent that he or she is an important participant in the survey. It *must* be important—look at the effort that has gone into making the form. But if the potential respondent wishes to see what the questionnaire is about, the respondent *must* open it. This is a psychological step toward completion that should not be overlooked. Look at the interior pages of the questionnaire. Probably the first thing that jumps out to the observer is the number of arrows on the form. These serve multiple purposes. First, they are a signal to the potential respondent that they will be guided through the questionnaire with minimum difficulty.

Second the arrows can be used (as they are in this case) to speed up completion of the questionnaire, such as guiding the respondent around irrelevant sections (note question 7a, for example). This reduces the time required to complete the questionnaire, which makes it more likely the respondent will complete and return it.

Third, arrows improve the quality of the data obtained, as they reduce reliance on the ability of the respondent to follow directions.

Note the questions on page 1. It is *good* questionnaire design to place interesting questions at the beginning, where they can pique the respondent’s interest. You can ask a respondent two types of questions—factual questions (how old are you, what crops do you raise, are you married?), and questions of opinion (what do you think about . . .?). Many survey designers make the mistake of placing what they view as the easier (usually factual) questions at the beginning and working up to the harder ones. But the easiest questions (like sex, marital status, age, and so forth) are also the most boring.

The way to get the respondent *interested* in your survey is to ask interesting questions right off the bat. Try to save the *boring* questions until the end, when the psychological boost of wanting to finish can help get the respondent through to the end.

Each of the questioning lines on pages 2 through 7 deal with one (and only one) type of product. The first question on each of those pages is a screening question. If the respondent is not a major purchaser of the product (defined by dollars or tonnage in the first question), then he or she does not have a major impact (or potential impact) on the cooperative’s sales. Thus, one doesn’t make the respondent answer questions for which no one really cares about the answers.

Improving Quality of Responses

Note the structure of the questions. In most cases, responses are to be recorded to the *left* of the answers. The only exceptions to this are open-ended questions (like question 7h) or the Likert items (such as question 18). This gets the respondent in the habit of always answering similar types of questions in the same way. This training results in quicker completion, which makes the questionnaire more likely to be finished and returned.

Another structuring tip is that questions are typed in both upper and lower case. Answers are always in UPPER case only. This makes it easy for the respondent to distinguish between questions and answers.

A few questions (such as those on age and farm sales) are ones in which, for some people, sensitive information is requested. The way resistance to answering is reduced is to ask the question in terms of broader categories, in which *specific* answers cannot be identified. Many people who feel that *specific* information is none of the researchers' business will be happy to give a general answer to the same question. Besides, how many people will be willing to figure out (or even know) *exactly* what their farm sales were last year? In most cases, little is lost in such a question, since results are usually stated in terms of young farmers versus old, large farms versus small, and so forth.

On many questions throughout the questionnaire, the respondent is reminded of how he or she is expected to answer. Questions often end with "circle number." Throughout the questionnaire, the respondent is reminded of how to give answers to questions.

On pages 2 through 7, the same ranking instructions are given each time for questions like 7b. The respondent is not expected to remember anything or turn back to review instructions. The goal is to get the person through the instrument as quickly as possible.

Often, when they observe the mistakes people make in filling out questionnaires, students wonder how *anyone* could be so dumb that they didn't understand what to do. Unfortunately, those students miss the point. Mistakes in filling out a survey are the *researcher's* fault, *not* the respondent's fault.

The goal of the researcher in questionnaire design must be to make the instrument as easy as possible to fill out, and to constantly make it as clear as possible to the respondent what is expected.

One of the better ways of approaching questionnaire design is to place yourself in the position of the respondent. How can that questionnaire be made as *easy* as possible to fill out?

Researchers occasionally make the mistake of designing a survey form for *their* convenience, not the respondent's. There are really no compromises with data coding or analysis that justify a less-than-optimal survey design.

As an example, look at page 2. The researcher wants to know whether the respondent bought fertilizer from the nearest supplier or not, if that nearest supplier was a co-op or not, about what percent of their fertilizer needs came from that supplier, and so on. These questions allow the researcher to get information as to whether closeness of supplier seems to make a difference in purchasing decisions. If the respondent purchases at least half of his or her fertilizer from this nearest source (and thus the researcher considers that nearest

source the primary supplier), the researcher terminates his/her questioning line on this page and sends the respondent to the next page.

If the nearest supplier is not the primary supplier, (the nearest supplier supplies less than half), other questions are *then* asked as to what kind of dealer it is, how far is it, and so forth. These questions are not the easiest to *code* for analysis, but they are among the easiest for the respondent to answer.¹

Other techniques are used in the questionnaire to make the process easier for the respondent. For example, examine question 7b. Several items like this are throughout the questionnaire. Note that the respondent is asked to rank *only three* of these as most important, second most important, and third most important. There are two reasons for ranking only three items: (1) it reduces the respondent's load and (2) it reduces the analysis load. It is highly unlikely that the lower ranked items will ever have much effect on buying decisions, else they would be ranked higher. That extra information is not likely to be of much use, so why bother the respondent for it?

In fact, it could be argued that only *one* item should be checked. As to whether this is the case, the researcher should ponder just what kind of analysis is desired after the data are collected. What kinds of questions will be asked of the data? What kind of data tables will be produced from them?

By now, you have seen that most decisions regarding questionnaire design are made with the *respondent* in mind. Each technique outlined above, by itself, is only a minor part of improving the quality of the data collected as well as the response rate. Taken as a whole package, however, they greatly improve the quality of the data.

Pretesting

One part of questionnaire design that should always be done is to pretest the instrument. No questionnaire is perfect, and often mistakes can be identified on a small pretest of 25 or 30 individuals (of the same type you intend to survey). Confusing directions and skipped questions can be identified and fixed.

Pretesting is especially useful in helping to identify double-barreled or loaded questions that contaminate the data with multiple meanings. A good example of a double-barreled question is "Are you a full-time farmer or do you have a part-time job?" Clearly, one cannot tell if a "yes" response to this question means the respondent is a full-time farmer, a farmer with a part-time job, or a nonfarmer with a part-time job.

The time to find these things out is when they can be corrected, not after 500 questionnaires have been received in the mail with the most important questions left blank.

¹See page 10 for explanation of coding.

Size of Questionnaire

Each page of the enclosed survey was created on an ordinary 8-1/2 x 11 sheet of typing paper. These pages were xeroxed at 78 percent of normal size, which shrank them far enough for two pages to fit side-by-side on an 8-1/2 x 14 page. The resulting pages were trimmed after folding in half and stapling. Further reductions beyond the 78 percent rate may sacrifice readability for space. But size is something that can be effectively judged with a pretest.

Length of Questionnaire

It is likely most co-op surveys would be substantially shorter than the example survey included. The example was created to cover as much ground as possible. Most co-ops probably have a shorter agenda of issues to address. Excellent, much shorter surveys can be used to focus in on one or two areas of prime interest.

It has been suggested (as a result of the pretest) that one or two product areas (on pages 2 through 7) could be eliminated. Herbicides and animal health products, for example, could be removed. The exact mix of products questioned should depend on the product mix of the co-op doing the survey. If herbicides or animal health products do not constitute a major part of co-op sales, then the information on these products is probably not of much use, and the respondent shouldn't be made to answer them. On the other hand, if a co-op is looking for ways to expand existing lines, such questions might take on more importance.

It is difficult to provide a model of a survey instrument that will suffice for each and every co-op. There must be room for adjustments to each situation. An area of concern for one co-op might not be any trouble for the next. Thus, the enclosed survey should act as a guide on how to construct a questionnaire, rather than the last word on what co-ops should ask and how they should ask it.

One last comment on questionnaire design. This kind of format (booklet form) is most suitable for a longer questionnaire. There have also been very short surveys (one page) that were also effectively done, and produced effective response rates because they reduce the costs to the respondent (in time and effort) in filling it out. If, however, a survey is longer than 2 pages, the booklet form should be strongly considered. It works!

MAILING PROCEDURES

Using the right mailing procedures, like good survey design, can improve the amount and quality of data.

Multiple Mailing

Many survey researchers send off one copy of the survey, and do analysis on the responses to that one mailing. One of the factors that contributes to a high response rate is that of repeated mailings of the survey and reminder postcards urging response. Many good reasons exist for not filling out a survey the first time. Too busy, out of town, sickness, and so forth, are all legitimate reasons.

This booklet also includes examples of two cover letters and a reminder postcard used to spur response. (See appendix C.)

Typically, survey booklets are folded and inserted in a business envelope along with a cover letter and a return envelope. If larger envelopes are used so the booklet doesn't have to be folded, the larger bulk-mail appearance is often taken for junk mail.

Personalization

Individually stamped envelopes are used to help boost response rates. (There is some psychological resistance to throwing away a good stamp.) Sometimes business envelopes are used, but they tend to make the mailing look less personal, with the associated penalties on response rate. The stamp implies a kind of personalization in these days of computer-generated mailing lists. Stamps are not necessarily more expensive to use than business envelopes.

If at all possible, the addresses on the originating envelopes should be either hand-typed, printed, or run through one of the laser printers that print directly to envelopes. The personalizing effect of the cover letter is destroyed if mailing labels are used to send it out (and make the envelope look like junk mail). The goal is to make the envelope and enclosed materials look like a personal communication, and thus encourage the individual to open the envelope.

The emphasis on personalization is not meant to suggest that some sort of computer-type database shouldn't be used to manage the project. As can be seen from the cover letters, they are documents that can be merged with a mailing list. A level of personalization is thus attained with the cover letter.

Followup

One week after the initial mailing, a reminder postcard is sent to encourage the respondent to return the survey. At 10 to 14 days after the postcard, a second mailing is sent out to those who haven't responded to the first mailing, thus lowering costs for later mailouts. Another reminder postcard is sent 1 week after the second mailout.

ID Numbers and Confidentiality

As part of the administration of the mailing procedures, each potential respondent is identified by a number. At each mailing, the ID number is placed on the return envelope, so the respondent may be identified as having returned the survey. As respondents reply, they can be checked off the list for further mailings. (This is where a data base program may be helpful). This reduces the cost of later mailouts.

The cover letter notes the ID number. In the interest of confidentiality, no identifying marks are placed on the questionnaire itself. If a person wishes a summary of the results, he or she is instructed to place their name and address on the back of the return envelope, *not* the survey form itself. This both reassures respondents of the confidentiality of their responses, and makes it easier to administer the summary mailout.

The assurance of confidentiality is one of the many things that enhances the response rate. If such a promise is made to the respondent, all due care must be made to adhere to it. The cover letter insists that the respondent's name will not be associated with the survey response. The person in charge of the survey must make absolutely sure this promise is not breached. In reality, if any kind of identifying mark is made on the returned materials, a link to the respondent can be made. It is the researcher's duty to make sure that such a link is *not* made.

To deal with this problem, respondents can be identified by a number in the data. The same number is linked to the name, *in a separate document* (or computer data base), which is never associated with the surveys (or data) themselves. And the name/number list is locked up, or password protected, with access only by authorized personnel.

The above procedures are believed to be adequate to protect the respondents. However, in some situations, an even higher level of protection—complete anonymity—may be promised if *confidentiality* cannot be assured. If the promise of anonymity is made, there must not be any way in which the respondent can be identified. There must be no ID numbers or anything else.

Unfortunately, complete anonymity will not allow the researcher to assess which individuals need to be mailed followup questionnaires. This may mean a complete second mailout, even to those who have already responded. Complete anonymity is more costly than the ID number system of sending out followups, but it may prevent sticky situations from arising among respondents.

Depending on the adequacy of the response rate, a third mailout might be used to further boost response rate. It is likely, however, that if all of the techniques in the manual are followed, there should be little trouble (but a bit of work) in attaining at least a 50 percent response rate, with good data for those who respond.

Costs

A method of estimating costs (exclusive of printing and envelope costs) for an initial sample of 1,000 is as follows:

First Mailing (1,000)

- A. Mailout cost (1st Class—2-ounce min.) _____
- B. Stamp on reply envelope _____
- C. Postcard reminder _____
- D. Total first mailing (A + B + C) _____ $\times 1,000 = \$$ _____

Second Mailing (700)

- E. Mailout cost (1st Class—2-ounce min.) _____
- F. Stamp on reply envelope _____
- G. Postcard reminder _____
- H. Total second mailing (E + F + G) _____ $\times 700 = \$$ _____

Total cost for two mailings \$_____

The above method assumes a 30-percent response to the first mailing and 20-percent additional respondents to the second mailing, resulting in a 50-percent response rate. By working through the above method, differences in costs between business-reply and stamped envelopes can be estimated.

However, research has suggested that stamped reply envelopes can increase response rates as much as 10-percent, and thus are the preferred method.

DATA CODING AND ANALYSIS

The collection of data is a crucial step in determining the needs and wants of cooperative members. It is also important that information be correctly handled and processed after it is collected.

Coding

Coding is the process of converting the data into a form that can be more easily analyzed. Usually coding is merely the act of converting a worded answer such as "yes" or "no", into numerical form, yes = 1, no = 0. For example, look at question 6. Here the respondent can choose from only three answers. If the respondent indicated he or she was more likely to purchase from a co-op, a one (1) would be placed in the spot indicating the answer for question 6. Similarly, a two (2) is recorded if the respondent is less likely to purchase from a co-op, and a three (3) if it doesn't make any difference.

If the coding is done properly, and each response has its own mutually exclusive space, the information will be in a form that is well organized and can be interpreted by a computer. This allows the use of the various software programs to facilitate the analysis of the data.

Software

Computerized spreadsheets, such as Lotus 1-2-3 are popular software packages for survey analysis. Each row of a spreadsheet is used to represent one respondent; the columns represent the variables. Thus, the process of coding and entering the data from the surveys could be structured to fit the format of a spreadsheet.

Once entered into a spreadsheet, many analysis procedures become available for use. Some popular spreadsheets allow the user to do screens, sorts, cross-tabulations (see below), plots, and frequency tabulations. These types of operations are what is necessary to get at the information contained in the data.

In fact, some spreadsheets can be used as a data entry device from which standard ASCII files can be output, and included in various statistical packages.

Missing Data

Occasionally, respondents will fail or refuse to answer certain questions, or will provide ambiguous answers. The coding scheme must provide for "missing" data so respondents with missing data are excluded from analyses that use variables on which some data are missing. This doesn't mean a questionnaire having *any* missing data should be thrown out. The questionnaire is still valid for inclusion in analyses of answered questions.

The major statistical packages have provisions for temporarily excluding respondents with missing data on particular questions. If the analysis is done using a spreadsheet, for example, special codes (such as -1, for instance) might be included in lieu of the actual question codes for those with missing data. Then the data set can be sorted by the variables of interest, and those with -1 on variables of interest can be temporarily excluded.

Analysis

This guide is by no means intended to teach statistics, but statistical analysis is part of finding out what farmers think. For the purposes of this guide, the basics of statistical analysis will be covered along with a few ways to present the data in a easy to understand form.

Some of the information on the survey can be used to evaluate how various segments of the farm population are satisfied or dissatisfied with co-op services and products. Suppose, for example, that a portion of respondents are unhappy with the co-op. If they are farmers close to retirement, then strategies to address their complaints are probably misplaced. If, however, the unhappy farmers are younger, solution to their complaints would probably take on higher priority. Similar kinds of questions can be asked about younger versus older farmers, larger versus smaller farm operations, and so on.

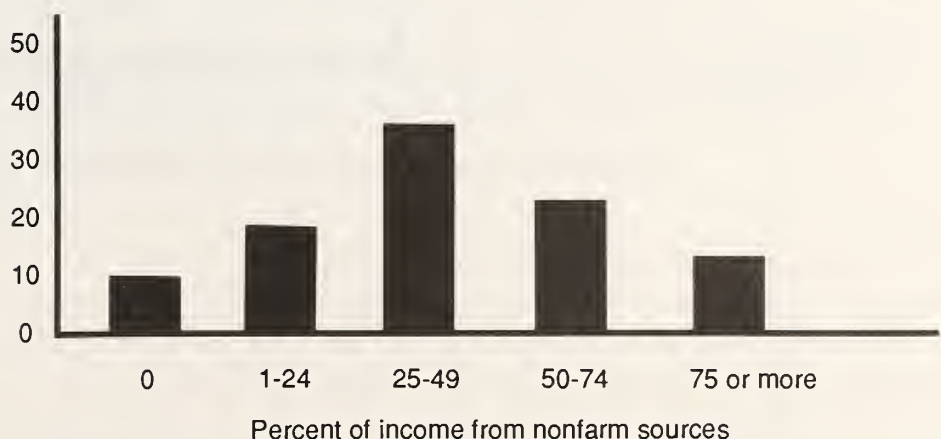
It might be argued that more weight should be given to the opinions of farmers with large operations, since they have a larger actual or potential impact on co-op activities. It may therefore be important to divide respondents on the basis of size, for example, before examining their opinions about co-ops. This can be especially useful in conjunction with question 6. If a particular segment of the farm population is identified as "less likely to purchase from a co-op," then efforts can be made to address their complaints.

Presentation of the information obtained through surveys is important. If it is not presented clearly, it may be misinterpreted. Following are a few examples of how various types of information might be presented.

Consider question 17 on page 8 of the survey. The question asks what percent of total household income comes from nonfarm sources. If the researcher wanted to show the distribution of nonfarm income for the respondents, a bar chart might be most useful. The following bar chart is constructed from fictitious information and is only an example.

Distribution of Total Household Income from Non-farm Sources

Number of cases



Notice that the bar chart is well labeled. The chart is easy to understand and is not cluttered with unnecessary information.

Another way to illustrate relationships in data is with contingency tables. The following example of a contingency table is constructed from fictitious data and shows the relationship between age of respondent (question 27) and whether the respondent would purchase from a co-op (question 6).

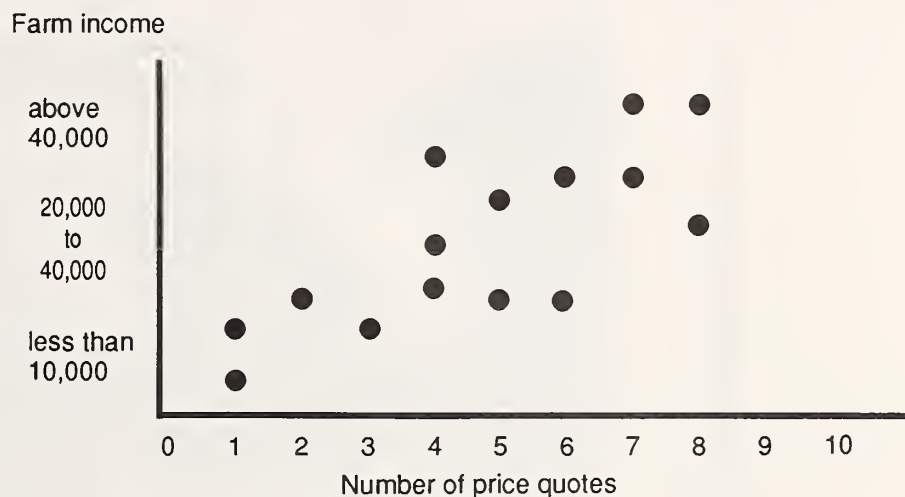
We can note from the above cross-tabulation that older farmers are less likely to purchase from a co-op than younger farmers. This might suggest that the co-op consider how to reach (and fill the needs of) the older farmers. Seeing data of this sort, one might ask what it is about the co-op that makes it a less attractive choice for older farmers, suggesting further analyses.

Another way to present data is through a scatterplot. The following scatterplot is constructed from fictitious data, and shows the relationship between farm income (question 14) and the number of different dealers contacted for a herbicide price quote (question 9h).

Relationship Between Age and Willingness to Purchase from Cooperative

Would purchase from co-op	less than 30	30-39	40-49	50 or over
YES	60%	51%	45%	20%
NO	40%	49%	55%	80%

Relationship Between Farm Income and Price Quotes



The above scatterplot suggests that there is a positive relationship between number of price quotes obtained and farm income. That is, farmers with higher sales tend to want more quotes before making decisions to buy. This may suggest that price is the major factor that enters into their decisionmaking framework. Such factors as service or timeliness may be secondary.

These examples are just a few of the ways that data can be presented. There is no set way in which data must be presented, but a few basic rules should be followed. Keep the table simple, keep it uncluttered, and make sure the table is precisely and accurately labeled.

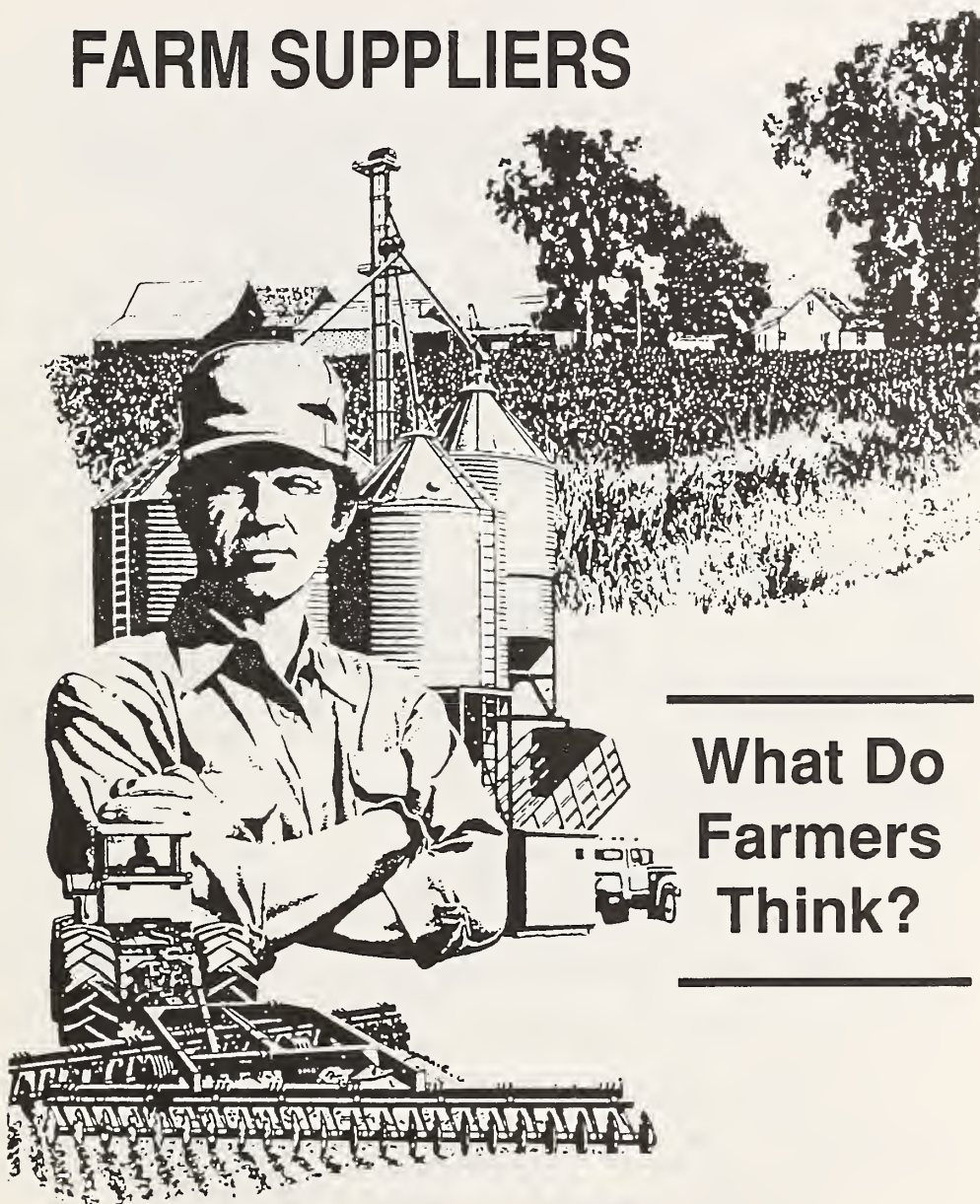
This report is a place to start for cooperative leaders interested in finding out more about what farmers think. The use of a mail questionnaire to determine this can be an effective tool for today's cooperative leaders. While this guide has presented an overview of the practices used in data collection, many factors must be considered.

If more information is needed, consult the book by Don Dillman entitled *Mail and Telephone Surveys: The Total Design Method*. Textbooks are also available for assistance with statistical procedures, or one may contact the nearest land-grant university.

APPENDIX A: EXAMPLE QUESTIONNAIRE

A large, empty rectangular box with a thin black border, occupying the majority of the page below the title. It is intended to represent the content of an example questionnaire.

FARM SUPPLIERS



**What Do
Farmers
Think?**

- 1 Do you operate a farm? (circle number)

0 NO

1 YES

(If NO)

Inasmuch as our purpose is to learn about farm operator's opinions about farm suppliers, we do not need your answers to the remainder of the questionnaire. However, we would appreciate your returning the questionnaire regardless. In addition, any comments you might have regarding farmers and farm suppliers would be appreciated. Above all, please return the questionnaire to us so we know that you are not a farmer. Thank you.

- 2 Are you the primary farm operator, the one who makes most of the farm purchasing decisions? (circle number)

0 NO

1 YES

(If NO)

Please give this to the primary farm operator to fill out. Thank you.

- 3 When you think of "service" from a farm supplier, what kind of things do you think of?

a. _____

b. _____

c. _____

- 4 If you could select a manager for a farm supply firm on only one characteristic or quality, which one would it be?

CHARACTERISTIC OR QUALITY: _____

- 5 How many total acres do you farm (that is, how many acres do you use for the raising of crops, livestock and so forth?)

_____ ACRES FARMED

- 6 Everything else being equal, are you more or less likely to purchase farm supplies from a cooperative? (circle number)

1 MORE LIKELY TO PURCHASE FROM A CO-OP.

2 LESS LIKELY TO PURCHASE FROM A CO-OP.

3 DOESN'T MAKE A DIFFERENCE.

7a In the past farm year, did you purchase more than one ton of fertilizer?
(circle number)

0 NO → Please go to 8a
1 YES

7b In deciding where to buy fertilizer, which of these factors were the three most important ones in your decision? (Place a "1" next to the most important, a "2" next to the second most important, and a "3" next to the third most important.)

____ SERVICE
____ BRAND/QUALITY
____ PRICE
____ PERSONAL RELATIONSHIP WITH MANAGER, DEALER, ETC.
____ DEALER LOCATION/ACCESSIBILITY
____ CREDIT POLICIES OF SUPPLIER
____ KNOWLEDGE OF FARMING BY DEALER/PERSONNEL
____ EXTENDED HOURS OF SUPPLIER
____ OTHER (PLEASE SPECIFY) _____

7c How many miles from your farm is the nearest fertilizer dealer (not necessarily your primary supplier?)

____ MILES

7d Is this nearest fertilizer dealer one of the following? (circle number)

1 CO-OP ELEVATOR OR CO-OP FARM SUPPLY STORE
2 OTHER ELEVATOR OR FARM SUPPLY STORE
3 FEED/SEED DEALER
4 PETROLEUM PRODUCTS COMPANY
5 OTHER (PLEASE SPECIFY) _____

7e What percentage of your fertilizer needs did you purchase from this nearest dealer?

0 ZERO PERCENT 3 50 TO 74 PERCENT → Please go to 7h
1 1 TO 24 PERCENT 4 75 TO 100 PERCENT
2 25 TO 49 PERCENT

7f If you did not purchase most of your fertilizer needs from the nearest dealer, how many miles is it to your primary fertilizer dealer; that is, the one you buy most of your fertilizer from?

____ MILES

7g Is your primary fertilizer dealer one of the following? (circle number)

1 CO-OP ELEVATOR OR CO-OP FARM SUPPLY STORE
2 OTHER ELEVATOR OR FARM SUPPLY STORE
3 FEED/SEED DEALER
4 PETROLEUM PRODUCTS COMPANY
5 OTHER (PLEASE SPECIFY) _____

7h How many different dealers do you normally contact for a price quote? ____

7i How many different dealers do you normally buy from each year? ____

7j How many years have you had the same primary dealer? ____

8a What is your major field crop?

Major field crop: _____
 NONE → Please go to 10a

8b In deciding where to buy seed for this crop, which of these factors were the three most important ones in your decision? (Place a "1" next to the most important, a "2" next to the second most important, and a "3" next to the third most important.)

____ SERVICE
 ____ BRAND/PERFORMANCE
 ____ PRICE
 ____ PERSONAL RELATIONSHIP WITH MANAGER, DEALER, ETC.
 ____ DEALER LOCATION/ACCESSABILITY
 ____ CREDIT POLICIES OF DEALER
 ____ EXTENDED HOURS OF SUPPLIER
 ____ KNOWLEDGE OF FARMING BY DEALER/PERSONNEL
 ____ OTHER (PLEASE SPECIFY) _____

8c How many miles from your farm is the nearest seed dealer (not necessarily your primary supplier)?

_____ MILES

8d Is this nearest seed dealer one of the following? (circle number)

1 CO-OP ELEVATOR OR CO-OP FARM SUPPLY STORE
 2 OTHER ELEVATOR OR FARM SUPPLY STORE
 3 FEED/SEED DEALER
 4 PETROLEUM PRODUCTS COMPANY
 5 OTHER (PLEASE SPECIFY) _____

8e What percentage of your seed needs did you purchase from this nearest seed dealer?

0 ZERO PERCENT 3 50 TO 74 PERCENT
 1 1 TO 24 PERCENT 4 75 TO 100 PERCENT
 2 25 TO 49 PERCENT

8f If you did not purchase most of your seed needs from the nearest dealer, how many miles is it to your primary seed dealer?

_____ MILES

8g Is your primary seed dealer one of the following? (circle number)

1 CO-OP ELEVATOR OR CO-OP FARM SUPPLY STORE
 2 OTHER ELEVATOR OR FARM SUPPLY STORE
 3 FEED/SEED DEALER
 4 PETROLEUM PRODUCTS COMPANY
 5 OTHER (PLEASE SPECIFY) _____

8h How many different dealers do you normally contact for a price quote? _____

8i How many different dealers do you normally buy from each year? _____

8j How many years have you had the same primary dealer? _____

9a In the past farm year, did you buy \$100 or more of herbicide for your major field crop

0 NO → Please go to 10a

1 YES ↓

9b In deciding where to buy herbicide for your major crop, which of these factors were the three most important ones in your decision? (Place a "1" next to the most important, a "2" next to the second most important, and a "3" next to the third most important.)

_____ SERVICE
 _____ BRAND/PERFORMANCE
 _____ PRICE
 _____ PERSONAL RELATIONSHIP WITH MANAGER, DEALER, ETC.
 _____ DEALER LOCATION/ACCESSABILITY
 _____ CREDIT POLICIES
 _____ KNOWLEDGE OF FARMING BY DEALER/PERSONNEL
 _____ EXTENDED HOURS OF DEALER
 _____ OTHER (PLEASE SPECIFY) _____

9c How many miles from your farm is the nearest herbicide dealer (not necessarily your primary supplier)?

_____ MILES

9d Is this nearest herbicide dealer one of the following? (circle number)

- 1 CO-OP ELEVATOR OR CO-OP FARM SUPPLY STORE
- 2 OTHER ELEVATOR OR FARM SUPPLY STORE
- 3 FEED/SEED DEALER
- 4 PETROLEUM PRODUCTS COMPANY
- 5 OTHER (PLEASE SPECIFY) _____

9e What percentage of your herbicide needs did you purchase from this nearest dealer?

- | | | |
|--------------------|---------------------|---------------------|
| 0 ZERO PERCENT | 3 50 TO 74 PERCENT | → Please go to 9h ↓ |
| 1 1 TO 24 PERCENT | 4 75 TO 100 PERCENT | |
| 2 25 TO 49 PERCENT | | |

9f If you did not purchase most of your herbicide needs from the nearest dealer, how many miles is it to your primary herbicide dealer?

_____ MILES

9g Is your primary herbicide dealer one of the following? (circle number)

- 1 CO-OP ELEVATOR OR CO-OP FARM SUPPLY STORE
- 2 OTHER ELEVATOR OR FARM SUPPLY STORE
- 3 FEED/SEED DEALER
- 4 PETROLEUM PRODUCTS COMPANY
- 5 OTHER (PLEASE SPECIFY) _____

9h How many different dealers do you normally contact for a price quote? _____

9i How many different dealers do you normally buy from each year? _____

9j How many years have you had the same primary dealer? _____

10a What is your major livestock species? If NONE → Please go to 12a

MAJOR LIVESTOCK SPECIES: _____

10b Is feed furnished to you as part of a contract for the animals? (circle number)

0 NO
1 YES → Please go to 11a

10c Did you purchase more than \$500 worth of feed for this livestock last year? (circle number)

0 NO → Please go to 11a
1 YES

10d In deciding where to buy feed for this livestock, which of these factors were the three most important ones in your decision? (Place a "1" next to the most important, a "2" next to the second most important, and a "3" next to the third most important).

____ SERVICE
____ BRAND/PERFORMANCE
____ PRICE
____ PERSONAL RELATIONSHIP WITH MANAGER, DEALER, ETC.
____ DEALER LOCATION/ACCESSABILITY
____ CREDIT POLICIES OF DEALER
____ EXTENDED HOURS OF DEALER
____ KNOWLEDGE OF FARMING BY DEALER/PERSONNEL
____ OTHER (PLEASE SPECIFY) _____

10e How many miles from your farm is the nearest feed dealer (not necessarily your primary supplier?)

____ MILES

10f Is this nearest feed dealer one of the following? (circle number)

1 CO-OP ELEVATOR OR CO-OP FARM SUPPLY STORE
2 OTHER ELEVATOR OR FARM SUPPLY STORE
3 FEED/SEED DEALER
4 PETROLEUM PRODUCTS COMPANY
5 OTHER (PLEASE SPECIFY) _____

10g What percentage of your feed needs did you purchase from this nearest feed dealer?

0 ZERO PERCENT
1 1 TO 24 PERCENT
2 25 TO 49 PERCENT
3 50 TO 74 PERCENT
4 75 TO 100 PERCENT → Please go to 11a

10h If you did not purchase most of your feed needs from the nearest dealer, how many miles is it to your primary feed dealer?

____ MILES

10i Is your primary feed dealer one of the following? (circle number)

1 CO-OP ELEVATOR OR CO-OP FARM SUPPLY STORE
2 OTHER ELEVATOR OR FARM SUPPLY STORE
3 FEED/SEED DEALER
4 PETROLEUM PRODUCTS COMPANY
5 OTHER (PLEASE SPECIFY) _____

11a In the past farm year, did you purchase more than \$100 of animal health products for your major livestock species? (circle number)

0 NO → Please go to 12a
1 YES

11b In deciding where to buy animal health products, which of these factors were the three most important ones in your decision? (Place a "1" next to the most important, a "2" next to the second most important, and a "3" next to the third most important).

____ SERVICE
____ BRAND/PERFORMANCE
____ PRICE
____ PERSONAL RELATIONSHIP WITH MANAGER, DEALER, ETC.
____ DEALER LOCATION/ACCESSABILITY
____ CREDIT POLICIES
____ KNOWLEDGE OF FARMING BY DEALER/PERSONNEL
____ EXTENDED HOURS OF DEALER
____ OTHER (PLEASE SPECIFY) _____

11c How many miles from your farm is the nearest animal health products dealer (not necessarily your primary supplier)?

____ MILES

11d Is this nearest animal health products dealer one of the following? (circle number)

1 CO-OP ELEVATOR OR CO-OP FARM SUPPLY STORE
2 OTHER ELEVATOR OR FARM SUPPLY STORE
3 FEED/SEED DEALER
4 VETERINARIAN
5 PETROLEUM PRODUCTS COMPANY
6 OTHER (PLEASE SPECIFY) _____

11e What percentage of your animal health products needs did you purchase from this nearest dealer? (circle number)

0 ZERO PERCENT 3 50 TO 74 PERCENT → Please go to 12a
1 1 TO 24 PERCENT 4 75 TO 100 PERCENT
2 25 TO 49 PERCENT

11f If you did not purchase most of your animal health products needs from the nearest dealer, how many miles is it to your primary animal health products dealer?

____ MILES

11g Is your primary animal health products dealer one of the following? (circle number)

1 CO-OP ELEVATOR OR CO-OP FARM SUPPLY STORE
2 OTHER ELEVATOR OR FARM SUPPLY STORE
3 FEED/SEED DEALER
4 VETERINARIAN
5 PETROLEUM PRODUCTS COMPANY
6 OTHER (PLEASE SPECIFY) _____

- 12a In the past farm year, did you purchase more than \$100 worth of petroleum products (such as gasoline and diesel fuel) for your farm? (circle number)

0 NO → Please go to 13
 1 YES ↓

- 12b In deciding where to buy petroleum products, which of these factors were the 3 most important ones in your decision? (Place a "1" next to the most important, a "2" next to the second most important, and a "3" next to the third most important).

____ SERVICE
 ____ BRAND/PERFORMANCE
 ____ PRICE
 ____ PERSONAL RELATIONSHIP WITH MANAGER, DEALER, ETC.
 ____ DEALER LOCATION/ACCESSABILITY
 ____ CREDIT POLICIES
 ____ KNOWLEDGE OF FARMING BY DEALER/PERSONNEL
 ____ TIMELINESS OF DELIVERY
 ____ OTHER (PLEASE SPECIFY) _____

- 12c How many miles from your farm is the nearest petroleum products dealer (not necessarily your primary supplier)?

____ MILES

- 12d Is this nearest petroleum products dealer one of the following? (circle number)

1 CO-OP ELEVATOR OR CO-OP FARM SUPPLY STORE
 2 OTHER ELEVATOR OR FARM SUPPLY STORE
 3 FEED/SEED DEALER
 4 PETROLEUM PRODUCTS COMPANY
 5 OTHER (PLEASE SPECIFY) _____

- 12e What percentage of your petroleum products needs did you purchase from this nearest dealer?

0 ZERO PERCENT
 1 1 24 PERCENT
 2 25 TO 49 PERCENT
 3 50 TO 74 PERCENT
 4 75 TO 100 PERCENT → Please go to 12h

- 12f If you did not purchase most of your petroleum products needs from the nearest dealer, how many miles is it to your primary petroleum products dealer?

____ MILES

- 12g Is your primary petroleum products dealer one of the following? (circle number)

1 CO-OP ELEVATOR OR CO-OP FARM SUPPLY STORE
 2 OTHER ELEVATOR OR FARM SUPPLY STORE
 3 FEED/SEED DEALER
 4 PETROLEUM PRODUCTS COMPANY
 5 OTHER (PLEASE SPECIFY) _____

- 12h How many different dealers do you normally contact for a price quote? _____

- 12i How many different dealers do you normally buy from each year? _____

- 12j How many years have you had the same primary dealer? _____

- 13 About what percent of your farm income comes from the sale of the following commodities?

☐ CORN/SORGHUM
☐ WHEAT
☐ SOYBEANS
☐ COTTON
☐ RICE
☐ BEEF
☐ HOGS
☐ DAIRY
☐ POULTRY (please specify) _____
☐ HAY OR SOD
☐ TIMBER
☐ FRUITS
☐ VEGETABLES
☐ TOBACCO
☐ BARLEY
☐ TURKEY
☐ EGGS
☐ BROILERS
☐ OTHER (please specify) _____

100%

- 14 Taking into account fluctuations in crop and livestock prices, what would be your average total sales per year for farm products, for the last three years? (circle number)

1 LESS THAN \$ 10,000	5 \$250,000 TO \$499,999
2 \$ 10,000 TO \$ 39,999	6 \$500,000 TO \$999,999
3 \$ 40,000 TO \$ 99,999	7 \$1,000,000 OR MORE
4 \$100,000 TO \$249,999	

- 15 Do you have an occupation/job other than farming? (circle number)

0 NO. I AM A FULL-TIME FARMER.  Please go to
 1 YES  question 17 

- 16 (If YES) What do you do? _____

Is this job one of the following? (circle number)

1 SEASONAL
 2 PART-TIME YEAR ROUND
 3 FULL-TIME
 4 OTHER (PLEASE SPECIFY) _____

- 17 About what percentage of your total household income comes from non-farm sources? (circle number)

1 ZERO
 2 1 TO 24 PERCENT
 3 25 TO 49 PERCENT
 4 50 TO 74 PERCENT
 5 75 PERCENT OR MORE

- 18 Given the current economic conditions, how likely is it that you will still be farming next year, and 5 years from now? (circle numbers)

	VERY UNLIKELY	UNLIKELY	NOT SURE	LIKELY	VERY LIKELY
FARMING NET YEAR	1	2	3	4	5
FARMING 5 YEARS FROM NOW	1	2	3	4	5

- 19 If you are not likely to be farming 5 years from now, what would be the major reason for quitting? (circle number)

- 1 RETIREMENT
- 2 POOR HEALTH
- 3 LACK FINANCIAL BACKING
- 4 WANT TO QUIT FARMING
- 5 NON-FARM JOB IS MORE ATTRACTIVE
- 6 OTHER (please specify) _____

- 20 How likely would you be to buy the following items if they were offered at a cooperative, assuming they were competitive with other local outlets? (circle numbers)

	VERY UNLIKELY	UNLIKELY	NOT SURE	LIKELY	VERY LIKELY
HOME APPLIANCES	1	2	3	4	5
HARDWARE	1	2	3	4	5
LAWN CARE ITEMS	1	2	3	4	5
GARDEN SUPPLIES	1	2	3	4	5

- 21 Please list below any product or services your co-op is not now providing that you believe it should provide.

22 What is your marital status? (circle number)

- 1 MARRIED
2 DIVORCED/SEPARATED
3 WIDOWED
4 SINGLE
- Please go to question 26

23 (If MARRIED) Does your spouse help operate the farm? (circle number)

- 0 NO
1 YES, ON A PART-TIME BASIS
2 YES, ON A FULL-TIME BASIS

24 (If MARRIED) Does your spouse make some of the purchasing decisions on your farm?

- 0 NO
1 YES

25 (If MARRIED) Does your spouse often pick up supplies you have purchased?

- 0 NO
1 YES

26 What is your sex? (circle number)

- 1 MALE
2 FEMALE

27 What is your age? (circle number)

- 1 LESS THAN 30 years
2 30 TO 39
3 40 TO 49
4 50 OR OVER

28 How much formal education have you completed? (circle number)

- 1 LESS THAN HIGH SCHOOL
2 HIGH SCHOOL
3 TECHNICAL OR TRADE SCHOOL
4 SOME COLLEGE
5 COLLEGE GRADUATE
6 ADVANCED COLLEGE DEGREE

Is there anything else you would like to tell us about your experiences with, and opinions about farm suppliers? If so, please use this space for that purpose. Also, any comments you would like to make that you feel may help us in understanding what farmers think will be greatly appreciated, either here or in a separate letter.

Your contribution to this effort is greatly appreciated. If you would like a summary of results, please print your name and address on the back of the return envelope (NOT on this questionnaire). We will see that you get it.

APPENDIX B: LETTERS AND POSTCARD

(First Mailing Cover Letter)

Date

Name

Address

Dear (Salutation):

We need your help in finding out what farmers think about (name of cooperative) and other farm suppliers' service in your community.

Your identity will not be revealed to anyone. You do not have to sign the survey. The return envelope has an identification number for mailing purposes only. This is so that we may check your name off of our selected list when your questionnaire is returned. We encourage you to make any comments or suggestions you might have. We want you to "tell it as you see it," both good and bad.

You may receive a summary of results by writing "copy of results requested" on the back of the return envelope and printing your name and address below it. Please do not put this information on the questionnaire itself.

Please return your completed survey form in the self-addressed postage paid envelope as soon as possible. In this manner, your needs and likes will be counted and considered.

Again, thanks for your help.

Cordially yours,

(Name and title of survey director)

ABC/de (writer/typist initials)

Enclosures -

Survey Form

Reply Envelope

(Second Mailing Cover Letter)

Date

Name

Address

Dear (Salutation):

I have not yet received your completed survey booklet I mailed to you on (Date). If you have mailed it in the meantime, please ignore this reminder and accept my thanks for your cooperation. If you have not yet returned your survey, please take a few minutes to complete the survey and return it in the enclosed self-addressed postage-paid envelope. The survey requires only check marks and brief responses. An extra copy has been enclosed for your convenience.

The purpose of the survey is for your cooperative to gain a better understanding of what you need and don't need and what you like and don't like about current services. With this improved understanding, (the cooperative name) can better serve you and your community in the future.

You do not have to sign the survey. We encourage you to make any comments or suggestions you might have.

Please return your completed survey booklet as soon as possible. We want to make sure that your needs and likes are counted and considered. Again, thanks for your help.

Cordially yours,

(Name and title of survey director)

ABC/de (writer/typist initials)

Enclosures -

Survey Form

Reply Envelope

(Postcard)

Date

Last week a questionnaire seeking your opinion about farm suppliers was mailed to you. Your name was drawn in a random sample of farm households in your area.

If you have already completed and returned it to us please accept our sincere thanks. If not, please do so today. Because it has been sent to only a small, but representative, sample of farm residents, it is extremely important that yours also be included in the study if the results are to accurately represent the opinions of farmers in your area.

If by some chance you did not receive that questionnaire, or it got misplaced, please call me right now, collect (XXX-XXX-XXXX) and I will get another one in the mail to you today.

Sincerely,

(Name and title of survey director)

U.S. Department of Agriculture Agricultural Cooperative Service

P.O. Box 96576

Washington, D.C. 20090-6576

Agricultural Cooperative Service (ACS) provides research, management, and educational assistance to cooperatives to strengthen the economic position of farmers and other rural residents. It works directly with cooperative leaders and Federal and State agencies to improve organization, leadership, and operation of cooperatives and to give guidance to further development.

The agency (1) helps farmers and other rural residents develop cooperatives to obtain supplies and services at lower cost and to get better prices for products they sell; (2) advises rural residents on developing existing resources through cooperative action to enhance rural living; (3) helps cooperatives improve services and operating efficiency; (4) informs members, directors, employees, and the public on how cooperatives work and benefit their members and their communities; and (5) encourages international cooperative programs.

ACS publishes research and educational materials and issues *Farmer Cooperatives* magazine. All programs and activities are conducted on a nondiscriminatory basis, without regard to race, creed, color, sex, age, marital status, handicap, or national origin.